



**Johnson Space Center
Procedural
Requirements**

JPR No.: 1280.2
Effective Date: 12/20/2007
Expiration Date: 12/20/2012
Formerly JPR 5335.3D

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Compliance is Mandatory

QUALITY MANUAL

Responsible Office: Management Integration Office



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Change History Log

Revision	Date	Originator	Description of Changes
Baseline	October 2007	AC3/L. Dyer	Change ISO 9000 Office to Management Integration Office. Convert JPR 5335.3 to JPR 1280.2. Move Key Characteristics to JPR 1281.9 Process Control. Update Appendices of Core Functions, Center-wide Processes and Compliance Map

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P. PREFACE

P.1 PURPOSE

The purpose of the Quality Manual is to document the scope and objectives of the JSC Quality Management System (QMS), and to identify the procedures established and their relationship to the requirements of the Standards to which it is certified. The Quality Manual also shows the flow-down of functional requirements from Agency policy to JSC operations.

P.2 APPLICABILITY

This JSC Procedural Requirement (JPR) is applicable to all JSC NASA organizations, including Ellington Field and the Sonny Carter Training Facility, except for the following:

- a) White Sands Test Facility
- b) Office of the Inspector General
- c) NASA Engineering Safety Center

JSC directives may apply to contractors or grant recipients only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

P.3 AUTHORITY

(All document citations are assumed to be the latest version unless otherwise noted.)

- a) JPD 1280.1, Quality Policy

P.4 APPLICABLE DOCUMENTS

(All document citations are assumed to be the latest version unless otherwise noted.)

- a) NPD 1000.0, Strategic Management and Governance Handbook
- b) NPD 1000.3, The NASA Organization
- c) NPD 1200.1, NASA Internal Control and Accountability
- d) NPD 1280.1, NASA Management System Policy
- e) NPD 8730.5, NASA Quality Assurance Program Policy
- f) NPR 7120.5, NASA Space Flight Program and Project Management Requirements
- g) NPR 1441.1, NASA Records Retention Schedule
- h) JPR 1107.1, JSC Organization
- i) JPR 1281.17, Audits

P.5 MEASUREMENT/VERIFICATION:

A. Audits, as prescribed by JPR 1281.17, shall be used to verify conformance with requirements.

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B. Center Director Metrics shall indicate implementation of the JSC Goals.

P.6 CANCELLATION / RESCISSION:

JPR 5335.3D, Quality Manual, dated December 11, 2006.

Original signed by:

H. Lawrence Dyer
Manager, Management Integration Office

Distribution:
JDMS

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1.0 SCOPE

The JSC QMS is a set of interrelated and interacting elements necessary to control the quality of JSC products and services. The QMS establishes requirements and procedures for the performance of functions that are common to all work performed by the Center, including resident program and project offices. The QMS also provides a basis for other management systems, such as the Safety and Health Program and the Environmental Management System.

2.0 OBJECTIVES

QMS objectives are the goals established by JSC to measure, report, and improve Center-wide operations. Goals are an expression of JSC commitment to safety, mission, technical and management excellence, and outreach, and are set by senior management.

Goal 1: Succeed - Successfully support and execute current programs.

Goal 2: Advance - Produce, enhance and sustain the technology, knowledge, facilities, and skills to enable exploration.

Goal 3: Manage - Enable current and future work through excellence in management.

Goal 4: Contribute - Demonstrate the benefits of space exploration.

Sub-goals, together with a hierarchy of measurements and metrics, and risk are used to characterize the performance against each Goal. Center performance is reported as Center Director metrics, which are the basis for conducting Center-wide management reviews.

3.0 REQUIREMENTS

3.1 Flow-Down

The products and services provided by JSC implement the NASA Strategic Plan which derives from the President's Vision for Space Exploration. The Strategic Plan establishes the Agency's mission, goals, and objectives. NASA mission directorates and program/project offices fund JSC directorates to provide products and services in fulfillment of those goals. JSC Management derives from Agency Governance and responsibilities established for the Center Director. The JSC QMS derives from Agency policy for internal controls, quality management and quality assurance. Requirements flow-down are shown as Figure 1.

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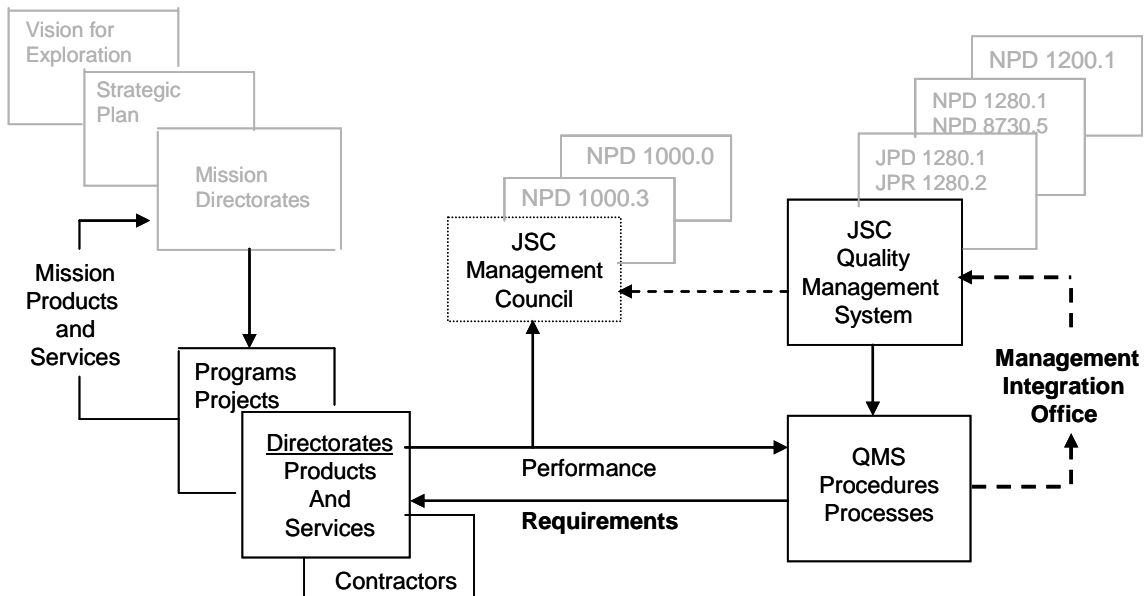


Figure1, Requirements flow-down and JSC management

3.2 Center Director

The Center Director establishes organization and structure including functional statements, delegations of authority, and lines of succession, which are documented as JPR 1107.1, The JSC Organization. Organizational Web sites communicate local structure and functional activities. In addition, the Center Director shall:

- Communicate to Sr. Staff the importance of meeting customer requirements
- Establish the quality policy,
- Ensure that quality objectives are established, measurable, and consistent with the quality policy,
- Conduct management reviews, and
- Ensure the availability of resources.

3.3 Senior Management

Senior Management sets measurable quality objectives at relevant levels within the organization, reviews the QMS to ensure its continuing effectiveness, and assesses opportunities for improvement and the need for change. In addition they shall ensure that:

- The planning of the QMS is carried out to meet the objectives and requirements;

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- b) Responsibilities and authorities are defined and communicated within the organization; and
- c) QMS integrity is maintained when change occurs, whether planned or unplanned.

Senior staff demonstrates its commitment to the operation and improvement of the QMS by ensuring the availability of resources, and communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements.

3.4 Supervisors and Staff

Supervisors and staff shall implement the QMS by ensuring that:

- a) Customer requirements are determined, communications are maintained, and satisfaction is measured;
- b) Products and services are planned—including having defined objectives, being developed under controlled conditions, measured, reviewed, and improved;
- c) Processes and their interactions used to provide products and services are defined, planned, measured, reviewed, and improved;
- d) Each defined process has a person or office responsible for its control and operation;
- e) Employee Performance Plans derive from the NASA Strategic Plan;
- f) Contracts and agreements include QMS requirements; and
- g) Contract administration includes surveillance commensurate with risk.

4.0 PROCEDURES

4.1 Directives

Directives shall be used to communicate policy, requirements and procedures applicable to all of JSC operations. JSC directives derive from Agency or local policy and requirements.

4.1.1 Each JSC directive has an Office of Primary Responsibility (OPR) who shall be responsible for content, as well as for compliance with the authorizing directive and conformance with configuration control requirements.

4.1.2 The Quality Policy, Quality Manual and 1281 series of directives constitute the core of the QMS and shall be compliant with both the Agency authorizing directives and with the requirements of the ISO9001 and AS9100 Standards. However, some of the core directives carry a different number in accordance with the Agency Filing Scheme. Directives comprising the JSC QMS core functions are listed as Appendix A.

4.1.3 Procedural requirements and instructions for performing tasks or steps within a process shall be controlled by documentation placed under configuration management. The Center-wide procedures used to perform JSC QMS core functions are listed in Appendix B. Organizational instructions used to control

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directorates-controlled processes are available electronically at <http://stic.jsc.nasa.gov/dbase/iso9000/master/master.cgi>. Note that instructions documented as web content only (and not supported by a configuration-controlled document) are used to provide guidance only and do not establish requirements.

4.2 Interactions

The QMS requirements and functions span the life cycle of product and service realization, from customer requirements through transition and retirement. The relationship between life cycle and QMS core directives is shown as Figure 2.

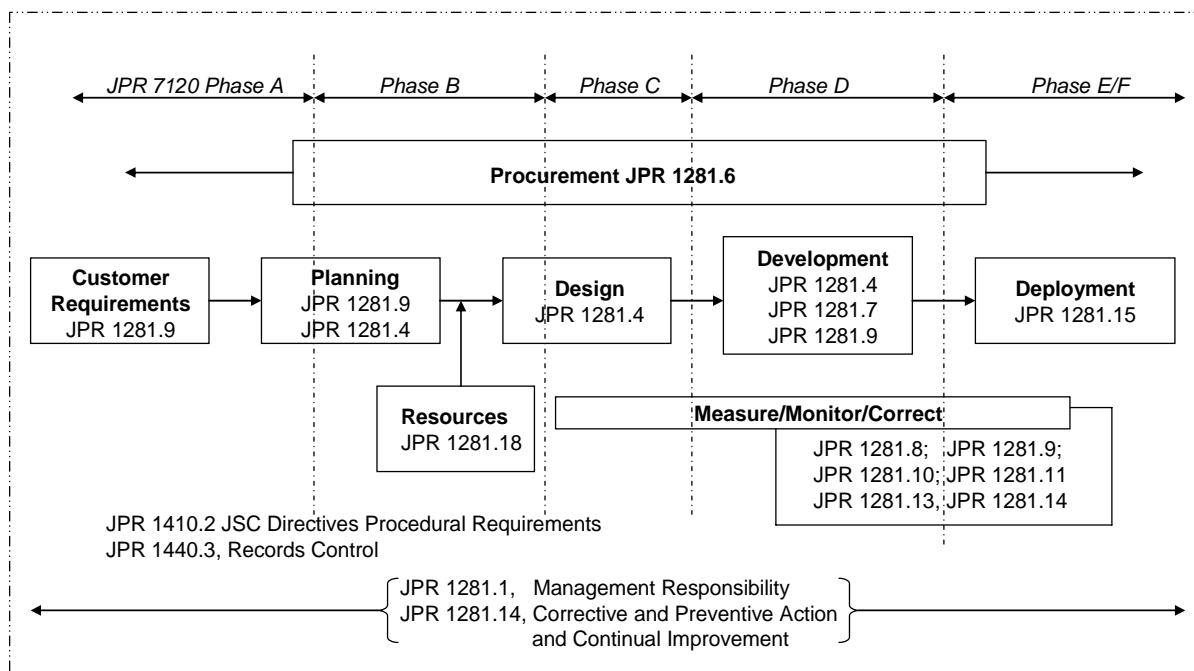


Figure 2 Relationship of QMS Core Directives to the Product/Service Life-cycle.

5.0 CERTIFICATIONS

Certifications maintain the quality of the QMS. The JSC QMS is certified as conforming with the ISO 9001-2000 Standard and the SAE AS9100, as determined by a third-party registrar. Requirements of the standard are met by documented procedures identified as Appendix A - QMS Core Directives . The traceability between requirements of the standards and QMS content is provided as Appendix C - Compliance Map.

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APPENDIX A. QMS CORE DIRECTIVES

Core Functions	Directive (Use is mandatory and subject to audit)	Office of Primary Responsibility
Management	JPD 1280.1, Quality Policy JPR 1280.2, Quality Manual JPR 1281.1, Management Responsibility	Management Integration Office
Document Control	JPR 1410.2*, JSC Directives Procedural Requirements JPR 1281.5, Document and Data Control	Information Resources Directorate
Records Control	JPR 1440.3*, JSC Files and Records Management Procedure	Information Resources Directorate
Resource Management	JPR 1281.18, Resource Management	Human Resources Office
Process Control	JPR 1281.9, Process Control	Management Integration Office
Audits	JPR 1281.17, Audits	Management Integration Office
Corrective Action	JPR 1281.14, Corrective and Preventive Action and Continual Improvement	Management Integration Office
Procurement	JPR 1281.6, Procurement	Office of Procurement
Product Development	JPR 1281.4, Design and Development JPR 1281.7, Control of Customer-Supplied Product JPR 1281.8, Product Identification and Traceability JPR 1281.10, Inspection and Testing JPR 1281.11, Control of Monitoring and Measurement Devices JPR 1281.13, Control of Non-Conforming Product JPR 1281.15, Identification, Handling, Storage, Packaging, Preservation and Delivery	Engineering Directorate Center Operations, Logistics Division Safety & Mission Assurance Directorate Safety & Mission Assurance Directorate Engineering Directorate Safety and Mission Assurance Directorate Center Operations, Logistics Division

* Some of the core directives carry a different number in accordance with the Agency Filing Scheme.

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APPENDIX B. CENTER-WIDE PROCESSES

The table shown below shows the relationship between core functions and the Center-wide processes used to perform them.

Core Functions	Center-wide Processes (Use is mandatory and subject to audit)	Office of Primary Responsibility
Management	<p>J29W-01, Export Control http://www4.jsc.nasa.gov/org/ja/export/ExportHelp.htm</p> <p>J29W-02, Foreign National Badge Requests</p> <p>JC9W-06, Facility Manager Program</p> <p>JPR 8553.1, JSC Environmental Management System (EMS) Manual</p> <p>JPR 8550.1, JSC Environmental Compliance Procedural Requirements</p> <p>JPR 1700.1, JSC Safety and Health Handbook</p>	<p>Management Integration Office</p> <p>Center Operations Directorate</p> <p>Safety & Mission Assurance Directorate</p>
Document Control	<p>JSC 27678, Organizational Master List Instructions</p> <p>JPR 1450.10, JSC Supplement to NPR 1450.10C, NASA Correspondence Management & Communications Standards & Style</p> <p>JPR 1450.5, Handling Incoming Mail, Suspense-Controlled Actions, and White House, Congressional, and Foreign National Correspondence</p> <p>JPD 2314.2, Managing Internal JSC Documents</p>	Information Resources Directorate
Resources Management	<p>JB9W-12, Personal Property/Equipment Instructions for Excess and Disposal</p> <p>J49W-03, How to Request Personnel Reliability Program Certification</p> <p>J69W-03, Energy Conservation</p>	Center Operations Directorate
Controlled Processes	JSC 05900, Emergency Preparedness Plan	Center Operations Directorate

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	J7-W-02, EO Deficiency Tracking System JB15W-20, Management of Controlled Equipment JE9W-06, EMS Aspect/Impact Assessments and EMS Processes JPR 1050.1, Space Act Agreements LA-CWI-02, Agreements (to be replaced by Internal Task Agreement JWI) LA-CWI-01, Budget Planning Process LA-CWI-03, Full-Cost Pricing Model	Advanced Planning Office Engineering Directorate Office of the Chief Financial Officer
Audits	AG-UWI-003, Conducting and Participating in Internal Audits JE17W-01, Conducting and Participating in EMS Audits	Management Integration Office Center Operations Directorate
Procurement	Purchase Card Program: http://officeofprocurement.jsc.nasa.gov/cc/index.htm Contractor Surveillance: http://officeofprocurement.jsc.nasa.gov/survplans.htm	Office of Procurement
Product Development	JSC 49774, Standard Manned Spacecraft Requirements for Materials and Processes JPR 8500.4, Engineering Drawing System Manual JPR 7120.3, Project Management: Systems Engineering and Project Control JPR 5335.4, Statistical Techniques for Product Acceptance JPR 5335.5, JSC Foreign Object Debris (FOD) Damage Prevention Program ES-CWI-006.32, IM&TE User Instructions for MSCL Calibration ES-CWI-006.33, IM&TE User Calibration Instructions	Engineering Directorate

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	NT-CWI-001, Task Performance Sheet	Safety & Mission Assurance Directorate
	NT-CWI-002, Product Verification Plan	
	NT-CWI-003, Quality Assurance Record Center Discrepancy Reporting and Tracking	
	NT-CWI-004, Flight Equipment Pre-Shipment Readiness Review	
	JPR 5335.6, Sampling and Validation Testing of Raw Materials and Gases	
	J69W-04, Construction of Facilities Budget Development	Center Operations Directorate
	J59W04, Facilities Project Construction Handbook	
	JB9W-09, How to Prepare and Process JSC Form 290, Shipping Document	
	JSC 49861, IRD Project Life Cycle Guidelines	Information Resources Directorate

APPENDIX C. COMPLIANCE MAP

Directive	ISO 9001 & AS 9100 Requirements
JPD 1280.1	5.3, 5.5.2
JPR 1280.2	4.1, 4.2, 4.2.2, 5.1, 5.5.1, 5.5.3
JPR 1281.1	5.1, 5.6, 8.2.1, 8.4
JPR 1281.4	7.1 (product), 7.3.1, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 7.3.6, 7.3.6.1, 7.3.6.2 (except 7.3.6.2b), 7.3.7
JPR 1410.2 and JPR 1281.5	4.2.1, 4.2.3
JPR 1281.6	7.4.1, 7.4.2
JPR 1281.7	7.5.4
JPR 1281.8	7.5.3
JPR 1281.9	5.2, 6.3b, 6.4, 7.1 (process), 7.2, 7.3, 7.5.1, 7.5.2, 8.1, 8.2.3, 8.4
JPR 1281.10	7.3.6.2b, 7.4.3, 7.5.3 (test status), 8.2.4
JPR 1281.11	7.6
JPR 1281.13	8.3
JPR 1281.14	8.5

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JPR 1281.15	7.5.5
JPR 1281.17	8.2.2
JPR 1281.18	6.1, 6.2, 6.3a and c
JPR 1440.3	4.2.4
Multiple*	4.3

* JSC implementation of Section 4.3, Configuration Management requirements is distributed with each organization having individual documents unique to the work being performed. Below is a partial list:

JSC 63420, Mission Control Center and Integrated Planning System Operational Change Control Policies

JSC 27029, Software Management Plan for Mission Control Center Applications

EA-WI-027, Configuration Management Requirements

KA-WI-002, 'Configuration Management Process: Astromaterials Research Office'

JSC 28330, SLSD Configuration Management-Management Plan

XA-ISO-001, Configuration Control Board Unique Work Instruction

NSTS-07700, Volume IV, Book 1

SSP 41170, Configuration Management Requirements

CxP 70073, Volume 3, Configuration Management Requirements

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Rev.	Date	Originator	Description
Basic	1/03	L. Dyer	JPG 5335.3 re-writes content originally contained in JPD 5335.1D and JSC SLP 4.2. Changes are not marked. JPD 5335.1E replaces JPD 5335.1D. JPG 5335.1 cancels JSC SLP 4.2.
Rev A	8/03	L. Dyer	Establish JSC Goals as quality objectives. Includes minor word changes.
Rev B	9/04	L. Dyer	Re-issue as a requirements document Add textual description of the JSC Goals
Rev C	3/06	L. Dyer	Rescind SLP 4.3 and 4.20; Align QMS objectives, JSC Goals and management reviews; Add Procedures interactions; and Add content to accommodate AS9100 requirements.
Rev D	10/06	L. Dyer	Revise Appendix B, Process Interactions to include the communication of key characteristics throughout a product life-cycle